UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/183,380	10/30/1998	EVERT M. BOSMA	PHN-16-611	3061

24738 7590 07/09/2004

PHILIPS ELECTRONICS NORTH AMERICA CORPORATION
INTELLECTUAL PROPERTY & STANDARDS
1109 MCKAY DRIVE, M/S-41SJ
SAN JOSE, CA 95131

EXAMINER	
TRAN, CON P	

ART UNIT	PAPER NUMBER
2644	26

DATE MAILED: 07/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/183,380	BOSMA ET AL.	
	Examiner	Art Unit	
	Con P. Tran	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 April 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,9-14 and 19* is/are rejected.

7)☒ Claim(s) *5-8 and 15-18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4-10-04 has been entered.

Specification

2. The disclosure is objected to because of the following informalities: On page 4, line 14, "and s caller_ID register" should be "and a caller_ID register".

Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1-4, 9, and 10** are rejected under 35 U.S.C. 102(b) as being anticipated by MacDavid U.S. Patent 4,270,208.

Regarding **claim 1**, MacDavid teaches a frequency shift keyed (FSK) demodulator (see Fig. 1 and respective portions of the specification) comprising:

input terminal (10) can receive an audio input signal encoded in frequency shift keyed signal communication and is capable for coupling the device to a subscriber line of telecommunication network (col. 1, lines 11-15; col. 3, lines 6-19);

a transmission circuit (col. 10, 24-28); and

a signal detecting arrangement (energy detection circuit 64), that is configured to determine a time-domain signal representing signal energy of substantial entirely of the signal on the subscriber line in a time interval (Fig. 2; see col. 6, lines 35-54),

wherein the signal energy detecting arrangement comprises,

a first comparator (a comparator of energy detector 64), the first comparator comparing the input signal (after going through demodulator 26, amplifier 46) with amplitude reference signal and generating a signal at a first comparator output (col. 5, lines 35-54);

an integrator (low pas integrator filter 66; col. 6, lines 18-22), the integrator for integrating the signal at the first comparator output (a comparator of energy detector 64; after going through ratio detector 62; col. 5, lines 44-54) at the predetermined time interval (total number of fixed sampling periods) and generating an integrated output (based on ratio detector circuit; col. 5, line 55 – col. 6, line 22); and

a second comparator (68), the second comparator comparing the integrated output with an energy reference signal (col. 6, lines 18-22), and generating a control signal at a second comparator output (col. 5, lines 40-42).

Regarding **claim 2**, MacDavid further teaches the signal energy is determined cyclically (see Fig. 2; col. 6, lines 3-22).

Regarding **claim 3**, MacDavid teaches output of signal ratio detector circuit (62) (which determines a ratio count indicative of the number of sampling periods over a total number of fixed sampling periods) is passed through low pass integrator filter 66. Thus, ratio detector circuit (62) inherently constitute a "trigger pulse" to initiate a signal energy determination process in comparator (68; col. 5, line 55 – col. 6, line 22).

Regarding **claim 4**, MacDavid further teaches a frequency shift keyed (FSK) demodulator operates according to a frequency shift keyed format (col. 3, lines 10-16), the signal energy being determined during at least one predetermined expected signal interval (i.e., over a total number of fixed sampling periods in which two or more consecutive transitions in the demodulated data signal occurred within a minimum time interval of each other; col. 5, lines 55-68).

Regarding **claim 9**, MacDavid further teaches wherein the energy determination is used for monitoring subscriber line load variations (impedance matching buffer 14; col. 3, lines 20-25).

Regarding **claim 10,** this claim is essentially similar to Claim 1 and is rejected for the reasons stated above regarding that claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. **Claims 11-14, and 19** are rejected under 35 U.S.C. 103(a) as being unpatentable over MacDavid U.S. Patent 4,270,208 in view of Hayakawa et al. U.S. Patent 5,237,589 (hereinafter, "Hayakawa").

Regarding **claim 11,** this claim is a digital application of claim 1. MacDavid does not explicitly disclose the digital application of claim 1. Hayakawa teaches in Fig. 17 a wave shaping circuit includes: a received signal is fed to three comparators 71, 72, and 73 with threshold values V1, V2, and V3, respectively; when the outputs from the

related comparators 71 to 73 are at a level H, the clock signal CLK is passed therethrough to associated counters 77, 78, and 79; count values then are respectively fed as the totals CN.sub.1, CN.sub.2, and CN.sub.3 to a CPU 80 which compares the result of the computation with a predetermined threshold value to produce a value of received data (col. 9, line 46 – col. 10, line 3). Thus Hayakawa circuit functions as a first comparator, an integrator, and a second comparator of MacDavid frequency shift keyed (FSK) demodulator.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement Hayakawa teaching by incorporate Hayakawa teaching and an analog-to-digital converter with frequency shift keyed (FSK) demodulator for purpose of comprehensively judging an overall waveform of an input signal as suggested by Hayakawa in column 1, lines 45-46.

Regarding **claim 12**, MacDavid further teaches the signal energy is determined cyclically (see Fig. 2; col. 6, lines 3-22).

Regarding **claim 13**, MacDavid teaches output of signal ratio detector circuit (62) (which determines a ratio count indicative of the number of sampling periods over a total number of fixed sampling periods) is passed through low pass integrator filter 66. Thus, ratio detector circuit (62) inherently constitute a "trigger pulse" to initiate a signal energy determination process in comparator (68; col. 5, line 55 – col. 6, line 22).

Regarding **claim 14**, MacDavid further teaches a frequency shift keyed (FSK) demodulator operates according to a frequency shift keyed format (col. 3, lines 10-16), the signal energy being determined during at least one predetermined expected signal interval (i.e., over a total number of fixed sampling periods in which two or more consecutive transitions in the demodulated data signal occurred within a minimum time interval of each other; col. 5, lines 55-68).

Regarding **claim 19**, MacDavid further teaches wherein the energy determination is used for monitoring subscriber line load variations (impedance matching buffer 14; col. 3, lines 20-25).

Allowable Subject Matter

7. **Claims 5 and 15** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The prior art of record disclosed a frequency shift keyed (FSK) demodulator in which detects signal energy of a signal as claimed but failed to to disclose or fairly suggest the signal protocol is a caller identification signal protocol and the expected signal comprises tone alerting signal.

Claims 6-8 are allowable by virtue of their dependency on claim 5.

Claims 15-18 are allowable by virtue of their dependency on claim 14.

Response to Arguments

9. Applicant's arguments with respect to claims 1-10 have been considered but are moot in view of the new grounds of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Con P. Tran whose telephone number is 703-305-2341. The examiner can normally be reached on M-F (8:30-5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Customer Service Office at telephone number 703-306-0377.

cpt CPT
June 25, 2004

FORESTER W. ISEN
SUPERVISORY PATENT EXAMINER